

Rolleia oberi new species—first record of the genus from the Dominican Republic, with a lectotype designation of *Cyclotus martensi* Maltzan, 1888 (Gastropoda: Annulariidae)

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ABSTRACT

The annulariid genus *Rolleia* Crosse, 1891, previously known only from Haiti, is recorded here from the Dominican Republic: *Rolleia oberi* new species. The syntype lot of a second *Rolleia*, *Cyclotus martensi* Maltzan, 1888 was found to consist of three different species. A lectotype is herein designated.

INTRODUCTION

Bartsch (1946) listed over 200 nominal species of annulariids for Hispaniola; only Cuba contains more taxa of this family. Nevertheless, an examination of Bartsch's localities reveals that there are areas of Hispaniola that had not been adequately studied and that will undoubtedly prove to harbor additional, new taxa. The northern provinces of the Dominican Republic and the western half of the Barahona Peninsula are such areas. Recent collections in these regions have revealed not only new species but range extensions of Haitian genera. This study describes a new Dominican Republic species of the "Haitian" genus *Rolleia*. Abbreviations: BMSM: The Bailey-Matthews Shell Museum, Sanibel, Florida, USA; OSUM: Ohio State University Museum of Biological Diversity, Columbus, Ohio, USA; UF: Florida Museum of Natural History, Gainesville, Florida, USA; ZMB: Museum für Naturkunde Berlin, Germany.

Rolleia Crosse, 1891

Type Species: *Cyclotus martensi* Maltzan, 1888, by original designation

Rolleia oberi new species
(Figures 1–6)

Description: Shell small-sized for family (holotype 8.1 mm maximum length, including peristome \times 10.3 mm maximum width, including peristome), thin, fragile, some-

what depressed helicoid, umbilicus very wide (holotype 36 % of maximum width), circular until final whorl, then elliptical, all whorls visible in umbilicus. Protoconch whorls 1.5, not demarcated from teleoconch, smooth, minute but prominent. Teleoconch of 3.0–3.5 whorls, last 1/8th turn free from previous whorl and deflected anteriorly. Suture impressed. Peristome double, circular (holotype 3.0 mm diameter maximum inner aperture height \times 3.1 mm diameter maximum inner aperture width; holotype 4.3 mm diameter maximum outer peristome height, somewhat broken \times 4.6 mm diameter maximum outer peristome width, somewhat broken). Outer lip thin, expanded perpendicular to whorl, narrowest facing umbilicus, touching previous whorl in well-preserved specimens. Inner lip protruded, tube-like, prominent. Inner lip bears same axial sculpture and appears as only a continuation of body whorl beyond juncture of outer lip. Spiral sculpture absent. Axial sculpture of regularly spaced, narrow lamella (ca.100 on final whorl), interstices smooth. Suture broken by axial lamella. Teleoconch dirty-white or crystalline, most specimens without any apparent pattern although some show faint tan rays on outer lip. Nuclear whorls may have a brown peripheral band. Operculum thin, multispiral with wide lamellum, originating perpendicularly to basal plate, then curling outward to parallel basal plate. Anatomy and radula unknown.

Type Material: Holotype: UF 434775, Dominican Republic, Puerto Plata Province, La Has, El Puerto, on the road about half way between Santiago and Puerto Plata, at altitude 830–1000 m in the Cordillera Septentrional; Paratypes: UF 434776 (9.7 mm maximum length, including peristome \times 9.2 mm maximum width, including peristome), UF 434776, (6.1 \times 5.0 mm, juvenile), UF 434776, (6.0 mm \times 5.0 mm, juvenile), BMSM 17970 (6.7 \times 8.2 mm), BMSM 17970 (7.3 mm \times 10.0 mm), OSUM 35489 (2 specimens, 7.4 \times 9.2, 7.9 \times 10.1 mm), all from the type locality.

Other Material Examined: Watters collection, GTW 14180a, 2 specimens (1 juvenile), from type locality.



Figures 1–6. *Rolleia oberi* new species, all from the Dominican Republic, Puerto Plata Province, La Has, El Puerto, on the road about half way between Santiago and Puerto Plata, at altitude 830–1000 m in the Cordillera Septentrional. **1–4.** Holotype UF 434775, 10.3 mm maximum width. **5.** Paratype UF 434776, 9.2 mm maximum width. **6.** Paratype OSUM 35489, 9.2 mm maximum width. **7–9.** Holotype USNM 504088 of *Rolleia haitensis* Bartsch, 1946, from Ennery, Haiti, 15.1 mm maximum width. **10, 11.** Lectotype ZMB 40725a of *Cyclotus martensi* Maltzan, 1888, from Plaisance, Haiti, ca. 15 mm maximum width. Courtesy Malacological Collection, Museum für Naturkunde Berlin, Leibniz Institute for Research in Evolution and Biodiversity at the Humboldt University [photography L. Maitas].

Comparison with Similar Species: *Rolleia oberi* differs from both *Rolleia haitensis* Bartsch, 1946 and *Rolleia martensi* (Maltzan, 1888) in having a higher spire, axial sculpture developed into sharp lamellae rather than low threads, and in the more laterally produced outer lip.

Distribution: Known only from the type locality. *Rolleia* was previously known only from two species, *R. haitensis* and *R. martensi*, both from the Ennery-Plaisance region of the Massif du Nord of Haiti. *Rolleia oberi* occurs ca. 200 km to the east in the Cordillera Septentrional of the Dominican Republic; this is the first record of the genus from that country.

Discussion: Maltzan (1888) described *Cyclotus martensi* from “Plaisance in parte boreali insulae Haiti” without illustration. Bartsch (1946: 141), in his discussion of that species, makes no mention of having seen the type material but based his description of it on USNM specimens “collected by Orcutt on limestone rocks 40 miles south of Cap-Haïtien.” Bartsch may have based his identification on the illustration of Crosse (1891: pl. 2, fig. 4) although there is no evidence that Crosse had seen the type lot either. (Wenz’s [1939: fig. 1471] illustration of *C. martensi* is too crude to be positively identified). Bartsch then described *Rolleia haitensis* (Figures 7–9) from Ennery, with additional localities of “on the mountain summit between Ennery and San Michel,” “14 miles north of Gonaïves,” “15 miles north of Gonaïves,” and “on Peterborough Mountain” (1946: 142). All of these sites are within a fairly close distance of each other in the Massif du Nord.

The syntype lot of *Cyclotus martensi* at ZMB consists of six specimens that were the combination of Maltzan’s lots 40725 and 41177 (now both 40725). Lot 40725 is from Plaisance-Gonaïves, lot 41177 is from Plaisance. Which of the six specimens originally went with which lot is not known. This combined lot contains all three species of *Rolleia*, including the new species described here: four specimens of *C. martensi* and one specimen each of *Rolleia haitensis* and *Rolleia oberi*. With the exception of shell size, Maltzan’s original description has little to identify which of the six specimens was used to describe *C. martensi*. But he gave the “Diam. maj.” as 14–16 [mm], apparently including more than one specimen. This eliminates his specimen of *R. haitensis*, which is only 11 mm in maximum diameter, as well as his specimen of *R. oberi*, which is only 10 mm. The remaining specimens are indeed all between 14 and

16 mm in maximum diameter and therefore are the only specimens in the type lot that could represent *C. martensi*. To avoid future confusion we designate ZMB 40724a as the lectotype (Figures 10, 11) of *Cyclotus martensi* and the remaining three specimens (ZMB 40725b) as paralectotypes. In addition we remove the specimens of *R. haitensis* and *R. oberi* from the type series of *Cyclotus martensi*.

What remains to be explained is how a specimen of *R. oberi* (and *R. haitensis*) ended up in the type lot of *C. martensi*. Maltzan’s only paper on annulariids described species from Haiti collected by the German shell dealer Hermann Rolle in 1887–88. *Rolleia oberi* is not known from the Massif du Nord where *R. haitensis* or *R. martensi* are recorded, nor from Haiti in general. Unless *R. oberi* occupies a much larger area than described here, which is unlikely, it must be the case that additional lots were somehow mixed.

Etymology: Named for Jim Ober, who assisted GD in the collection of the specimens.

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